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CLAIMS

1. An electric generating convertible bicycle, comprising:

a conventional bicycle of the type having a plurality of gears that can be varied by a rider during use of said bicycle;

a generator having a shaft and a roller operatively attached to said shaft, said roller adapted for frictional engagement with an outer circumferential surface of a rear tire of said bicycle; and

means for maintaining said roller in frictional engagement with said with said outer circumferential surface.

2. The electric generating convertible bicycle of claim 1 wherein said means for maintaining includes a stand, said stand adapted to cooperate with an axle of a rear wheel of said bicycle sufficient to retain said rear wheel thereto and wherein said rear tire is elevated above a surface said stand is adapted to be placed on and wherein said stand includes a first and a second upright member and wherein

said second upright member is attached at an upper end thereof to a distal end of a horizontal support member and to said generator and wherein said horizontal member includes an opposite end that is attached to a frame member of said bicycle and wherein said horizontal support member of said stand and said frame member cooperate to maintain said roller in sufficient frictional contact with said outer circumferential surface when said bicycle is disposed on said stand.

3. The electric generating convertible bicycle of claim 3 wherein said bicycle is adapted to be removed from said stand subsequent to a loosening of at least one nut on said axle and wherein said first upright member includes a U-shaped upper end that is adapted to receive said axle therein.

4. The electric generating convertible bicycle of claim 1 wherein said generator includes an electrical output that is operatively connected to an input of a storage battery and wherein said electrical output is adapted to charge said storage battery.

5. The electric generating convertible bicycle of claim 4 wherein said storage battery is distally located with respect to said bicycle.

6. The electric generating convertible bicycle of claim 4 wherein said storage battery is adapted to be carried on said bicycle when said bicycle is separated from said stand.

7. The electric generating convertible bicycle of claim 4 wherein said storage battery includes an output that is in parallel electrical connection with respect to said input and wherein said output of said storage battery is operatively connected to an inverter, said inverter converting a direct voltage and current into an alternating voltage and current.

8. The electric generating convertible bicycle of claim 1 wherein said generator includes an alternator.

9. The electric generating convertible bicycle of claim 1 wherein said means for maintaining said roller in frictional engagement with said outer circumferential surface includes a horizontal member that is pivotally attached at one end to a frame of said bicycle and at an opposite end to said generator, and wherein said horizontal member is adapted to pivot at said one end an amount that is sufficient to raise said opposite end and remove said roller from frictional engagement with said outer circumferential surface and wherein said horizontal member is adapted to pivot at said one end an amount that is sufficient to lower said opposite end and engage said roller into frictional engagement with said outer circumferential surface sufficient to cause said generator to produce an electrical energy and wherein said bicycle is adapted to be ridden in a conventional manner and said generator is adapted to produce said electrical energy and said battery is adapted to store at least a portion of said electrical energy.

10. The electric generating convertible bicycle of claim 9 including means adapted for said rider to raise and lower said opposite end of said horizontal member.

11. The electric generating convertible bicycle of claim 10 wherein said means adapted for said rider to raise and lower said opposite end includes a lever and a cable, said cable operatively attached to said lever at a first end and to an actuator at an opposite second end, and wherein when said lever is urged in a first direction said opposite end of said horizontal member is raised and when said lever is urged in a second opposite direction said opposite end of said horizontal member is lowered.

12. The electric generating convertible bicycle of claim 4 including a battery gauge, said battery gauge being electrically connected to said battery and adapted to indicate a level of charge of said battery.

13. The electric generating convertible bicycle of claim 12 wherein said battery gauge is attached to said bicycle.

14. The electric generating convertible bicycle of claim 1 including a mass that is attached to a crank of said bicycle, said mass adapted to increase a rotational inertia

of said crank and thereby smooth out the process of rotating said crank.

15. The electric generating convertible bicycle of claim 1 including a mass that is attached to a rear wheel of said bicycle, said mass adapted to increase a rotational inertia of said rear wheel and thereby smooth out the process of rotating said crank.

16. The electric generating convertible bicycle of claim 1 including a switch that is adapted to add an electrical load to said generator when said switch is in a closed position and to remove said electrical load when said switch is not in said closed position.

17. The electric generating convertible bicycle of claim 1 including a stand that is adapted to pivot about a longitudinal axis of a rear axle of said bicycle from a first lower position wherein said bicycle is adapted for stationary use into a second raised position wherein said bicycle is adapted for portable use.

18. The electric generating convertible bicycle of claim 17 including a pair of elongated nuts that are each attached to one end of said axle, wherein each of said elongated nuts include an extended length longitudinal inside thread that is adapted to cooperate with an end of said axle on one side each of said elongated nuts and to receive a portion of one of a pair of bolts on an opposite end of each of said elongated nuts, said each bolt adapted to secure a portion of one side of said stand to a corresponding side of said bicycle, and wherein when said pair of bolts are loosened, a lower assembly of said stand is adapted to pivot intermediate said first and said second positions and when said pair of bolts are tightened, said lower assembly of said stand is not adapted to pivot intermediate said first and said second positions.

19. The electric generating convertible bicycle of claim 18 including an extension handle attached to at least one of said pair of bolts, said extension handle providing sufficient leverage to permit a user to loosen or tighten said at least one of said pair of bolts.

20. An electric generating convertible bicycle, comprising:

a conventional bicycle of the type having a plurality of gears that can be varied by a rider during use of said bicycle;

a generator having a shaft and a roller operatively attached to said shaft, said roller adapted for frictional engagement with an outer circumferential surface of a rear tire of said bicycle;

means for maintaining said roller in frictional engagement with said outer circumferential surface; and

wherein said means for maintaining said roller in frictional engagement with said outer circumferential surface includes a horizontal member that is pivotally attached at one end to a frame of said bicycle and at an opposite end to said generator, and wherein said horizontal member is adapted to pivot at said one end an amount that is sufficient to raise said opposite end and remove said roller from frictional engagement with said outer circumferential surface and wherein said horizontal member is adapted to pivot at said one end an amount that is sufficient to lower said opposite end

and engage said roller into frictional engagement with said outer circumferential surface sufficient to cause said generator to produce an electrical energy and wherein said bicycle is adapted to be ridden in a conventional manner and said generator is adapted to produce said electrical energy and said battery is adapted to store at least a portion of said electrical energy.